

## The Mozambique Cancellariidae (Mollusca: Gastropoda)

by

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### SYNOPSIS

All of the known Mozambique Cancellariidae are discussed and figured. The species are *Scalptia obliquata* (Lamarck, 1822), *Scalptia crossei* (Semper, 1861), *Scalptia contabulata* (Sowerby, 1833), *Scalptia bicolor* (Hinds, 1843) and *Fusiaphera eva* n. sp.

*Trigonaphera* Iredale, 1936 is placed in the synonymy of *Scalptia* Jousseaume, 1887 and *Cancellaria asperula* Deshayes, 1830 is placed in the synonymy of *Scalptia obliquata* (Lamarck, 1822).

### INTRODUCTION

This paper deals with all of the known Mozambique Cancellariidae: four species of *Scalptia* and one new species of *Fusiaphera*. Genus-level taxa in Cancellariidae are, at this time, based entirely on shell morphology and various writers have treated the available taxa differently. Garrard (1975, p. 19), in his monograph on the Australian Cancellariidae used the genus *Trigonostoma* for some species here placed in *Scalptia*. *Trigonostoma* is characterised by a loosely coiled, widely umbilicate shell, and the presence of two columellar folds. Species of *Scalptia* are not as widely umbilicate and have three folds on the columella.

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### Genus *Scalptia* Jousseaume, 1887

*Scalptia* Jousseaume, 1887, *Le Naturaliste*, 2e ser., p. 213.

Type species (original designation) *Cancellaria obliquata* Lamarck, 1822.

*Trigonaphera* Iredale, 1936, *Rec. Aust. Mus.*, 19: 319. **Syn. n.**

Type species (original designation) *Trigonostoma vinnulum* Iredale, 1925.

The characters differentiating *Scalptia* and *Trigonaphera* Iredale, 1936 are very variable and placement of some species into one taxon to the exclusion of the other is highly subjective. For this reason *Trigonaphera* is herein placed in the synonymy of *Scalptia*.

### *Scalptia obliquata* (Lamarck, 1822) **comb. n.**

*Cancellaria obliquata* Lamarck, 1822: 115; Sowerby, 1832: 4, fig. 26; Sowerby, 1849: 453, pl. 96, fig. 83 (not fig. 82); Reeve, 1856: pl. 13, fig. 61; Tryon, 1885: 81, pl. 6, fig. 1; Lobbecke, 1886: 60, pl. 17, figs. 4, 5.

*Cancellaria asperula* Deshayes, 1830: 187, **syn. n.**

*Cancellaria (Trigonostoma) obliquata*; Schepman, 1911: 264.

*Trigonaphera obliquata*; Kuroda, 1965: 9.

*Trigonostoma obliquata*; Garrard, 1975: 26, pl. 3, fig. 17.

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*Descriptive notes:* Shell rounded with well-impressed sutures. Umbilicus small, deep. Sculpture of strong axial ribs crossed by fine spiral striae which form nodules on the ribs. Columella straight with three strong folds. Outer lip thickened with 10–12 lirae within and a well-developed anterior tooth below the shoulder. Colour white or brownish, with brown spiral lines appearing only on the top of the axials where they appear as dots.

*Distribution:* Mozambique, Western Australia, New Caledonia, Japan, Philippines.

*Regional locality records:* NORTHERN MOZAMBIQUE: Nacala Bay, fine sand and *Thalassodendron*, 2 ft above L.S.T.; Conducia Bay, fine sand near rocks, L.S.T.; Mozambique Bay, sand near rocks, 2 ft above L.S.T.; Lunga Bay, sand near small coral, 1 ft above L.S.T. (all N.M.: K. Grosch). SOUTHERN MOZAMBIQUE: between Inhaca Island and Ponta Zavora, *ex pisce* (N.M.: C. P. Fernandes).

*Remarks:* This is a widely distributed and easily recognised species. *Cancellaria asperula* Deshayes, which has been ignored in the literature, is here placed in the synonymy of *Scalptia obliquata*. The type of *C. asperula* is in the collection of the Ecole des Mines, Paris. The type of *C. obliquata* is in the collection of the Museum d'Histoire Naturelle, Geneva, No. 1097/91.

*Scalptia crossei* (Semper, 1861) **comb. n.**

*Cancellaria serrata* Reeve, 1856: sp. 63 (*non* Bronn, 1831)

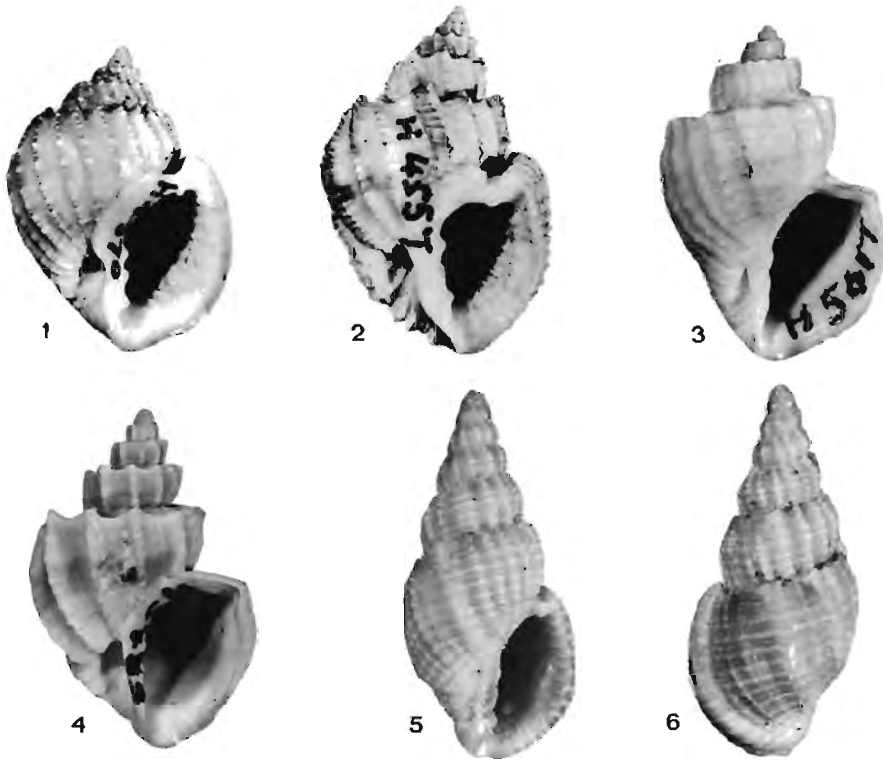
*Cancellaria crossei* Semper, 1861: 257 (*nom. subst. pro C. serrata* Reeve *non* Bronn).

*Cancellaria (Trigonostoma) crenifera* Sowerby var. *serrata*; Melvill & Standen, 1901: 451.

*Descriptive notes:* Shell rounded and rather high-spired, suture impressed. Umbilicus small but deep, columella with three folds, outer lip thickened with well-developed lirae within. Sculpture of axial ribs crossed by spiral ridges which achieve prominence only on the ribs where they form sharp nodules. Ribs extend above shoulder, giving coronate appearance. Colour of shell white, with bands of brown present in varying degrees.

*Remarks:* There has been, and is, considerable confusion regarding the identification of some species of *Scalptia*. *Scalptia crossei*, together with *C. lamellosa* Hinds, was placed in the synonymy of *C. crenifera* Sowerby by Tryon (1885: 80) and has been omitted from most subsequent literature. Melvill & Standen (1901: 451) treated *C. serrata* Reeve as a variety of *C. crenifera* Sowerby, and stated that it was found together with *C. crenifera*. Garrard (1975: 29) placed *C. crenifera* in the synonymy of *C. scalarina* Lamarck.

It is my opinion that *C. crossei*, *C. lamellosa* and *C. crenifera* are separable species, but a definitive statement about the true relationship of these taxa cannot be made until sufficient material from throughout the Indo-Pacific area becomes available for study. The Mozambique specimens agree with the types of *C. crossei* (British Museum (Natural History) 1968407, two syntypes of *C. serrata* Reeve). *Scalptia crossei* has been recorded from north-eastern South Africa as *Cancellaria lamellosa* Hinds, 1843 by Barnard (1959: 15).



Figs 1-6. Mozambique Cancellariidae. 1-4. *Scalptia* species. 1. *S. obliquata* (Lamarck, 1822), 22,7 × 16,1 mm, Mozambique Bay, NM H4570. 2. *S. crossei* (Semper, 1861), 25,8 × 17,2 mm, Conducia Bay NM H4557. 3. *S. contabulata* (Sowerby, 1833), 20,9 × 14,8 mm, Memba Bay to Lunga Bay, NM H5617. 4. *S. bicolor* (Hinds, 1843), 20,0 × 13,8 mm, Conducia Bay, NM H5483. 5-6. *Fusiaphera eva* sp. n., holotype, 14,9 × 6,7 mm, NM G4896/T2302.

*Distribution:* North-eastern South Africa to the Philippines.

*Regional locality records:* NORTHERN MOZAMBIQUE: Nacala Bay, under coral in sand, 2 ft above L.S.T.; Conducia Bay, in sand around rocks and *Thalassodendron*, 2 ft above L.S.T.; Mozambique Bay, 2 ft above L.S.T.; Lunga Bay, underside of rock (all N.M.: K. Grosch). SOUTHERN MOZAMBIQUE: Bazaruto Island, sandbank (N.M.: N. Cumming).

*Scalptia contabulata* (Sowerby, 1833) **comb. n.**

*Cancellaria contabulata* Sowerby, 1833: fig. 28; 1849: 455, pl. 93, figs. 19, 23; Reeve, 1856: sp. no. 42; Lobbecke, 1881: 8, pl. 1, figs. 9, 10.  
*Cancellaria pusilla* Sowerby, 1833: fig. 34.  
*Cancellaria forestieri* Montrouzier, 1863: 161, pl. 5, fig. 7.  
*Cancellaria montrouzieri* Souverbie, 1863: 163, pl. 5, fig. 8.  
*Cancellaria rougeyroni* Souverbie, 1870: 427, pl. 14, fig. 1.  
*Trigonaphera contabulata*; Kuroda, 1965: 9.

*Descriptive notes:* Shell turreted, suture appressed. The small but deep umbilicus is partially obscured by the reflection of the anterior portion of the inner lip. The

body whorl slopes down markedly from the suture to a slightly noded shoulder. Sculpture of weak axial ribs and fine spiral ridges. Columella with three descending folds. Outer lip lirate within. Colour variable from whitish to cream, but most commonly light brown.

*Distribution:* Mozambique, Madagascar, Japan, Philippines, Fiji, New Caledonia.

*Regional locality records:* NORTHERN MOZAMBIQUE: Memba Bay to Lunga Bay, depth and bottom data not available (5 specimens, all N.M.: K. Grosch).

*Remarks:* *Scalptia contabulata* (Sowerby) was placed in the synonymy of *S. scalata* (Sowerby) by Cernohorsky (1972, p. 181), who referred the species to *Trigonaphera*. However, the portion of the body whorl posterior to the shoulder angle in *S. scalata* has a U-shaped channel, while the same area in *S. contabulata* is flat and sloping. The two are evidently closely related, but are readily separable. *Scalptia scalata* appears to be restricted to Mauritius, while *S. contabulata* is widely distributed. The types of *S. contabulata* are in the collection of the British Museum (Natural History) no. 1968402 (four syntypes).

*Scalptia bicolor* (Hinds, 1843) **comb. n.**

*Cancellaria bicolor* Hinds, 1843: 48; 1844: 43, pl. 12, figs. 13, 14; Sowerby, 1849: 456, pl. 94, figs. 49, 50, pl. 95, fig. 69; Reeve, 1856: pl. 7, fig. 29; Lobbecke, 1887: 87, pl. 22, figs. 3, 4; Tryon, 1885: 79, pl. 5, fig. 86, pl. 6, figs. 89, 90.

*Cancellaria (Trigonostoma) bicolor*; Melvill & Standen, 1901: 450; Schepman, 1911: 263.

*Cancellaria septemcostata* Odhner, 1917: 55, pl. 2, fig. 57.

*Trigonaphera interlaevis* Lasseron, 1955: 270, fig. 9.

*Trigonaphera bicolor*; Habe, 1961: 436, pl. 23, figs. 1, 2; pl. 24, figs. 1, 2.

*Trigonostoma bicolor*; Garrard, 1975: 21, figs. 3(10), 5(4).

*Descriptive notes:* Shell tabulate, sutures slightly impressed, sculpture of strong axial ribs which continue across the shoulder to the suture. Spiral sculpture variable, usually consisting of numerous spirals interspaced with several finer spirals. Umbilicus deep. Aperture trigonal with short open siphonal canal. Columella straight with three strong, sharply descending folds. Outer lip thickened with well-developed lirae within. Inner lip reflected as a callus on body whorl and extending partly over the umbilicus. Colour and colour pattern variable, usually consisting of brown or dark red bands of various widths. Some Mozambique specimens are uniformly banded with brown between white spiral ribs.

*Distribution:* Mozambique to Australia, Japan, Philippines.

*Regional locality records:* NORTHERN MOZAMBIQUE: Nacala Bay, among rocks in muddy sand, *Thalassodendron*, 1 ft above L.S.T.; Memba Bay, under rock in fine sand, L.S.T.; Conducia Bay, in fine sand, *Thalassodendron*, small rocks, L.S.T.; Mozambique Bay, under rock, *Thalassodendron* and fine sand, 1 ft above L.S.T.; Lunga Bay, among rocks and *Thalassodendron*, gravel fine sand, L.S.T. (all N.M.: K. Grosch); Mozambique Island (N.M.: R. Kilburn).

*Remarks:* This is a well-known Indo-Pacific species which is quite variable in colour and colour pattern. The types of *S. bicolor* are in the British Museum (Natural History), no. 1968413 (four syntypes).

Genus *Fusiaphera* Habe, 1961

Type species (original designation), *Fusiaphera macrospira* (Adams & Reeve) (= *Cancellaria macrospira* Adams & Reeve, 1850).

*Fusiaphera eva* sp. n.

**Description:** Protoconch smooth, naticoid, of about three whorls. Postnuclear whorls about 6 in number, sculptured with axial ribs and spiral ridges. Axial ribs, which number about 15 on postnuclear whorls, are evenly spaced on early whorls, but as the shell reaches maturity the spacing is interrupted by the development of irregularly spaced varices. Spiral sculpture consists of evenly spaced ridges which cross the axials and number about 14 on body whorl, with about 6 visible on spire whorls. Suture impressed, forming a small channel which is crossed by axial ribs, which sometimes extend above the shoulder, forming tiny coronations. Aperture narrowly ovate, with a single strong spiral ridge inside anterior end, flanked by two smooth U-shaped channels. Slightly inside the smooth outer lip are 12 well-defined plications which descend into aperture. Outer lip with a barely discernible stromboid notch. Parietal shield well-developed and slightly pustulated. Columella with three descending folds, the anterior one forming the edge of the short, inclined siphonal canal. Colour brownish-cream, with spiral cords and varices sometimes much paler than rest of the shell. Inner portion of outer lip with reddish-brown stains which are most prominent on the central part of the outer lip and on the central and outer parts of the parietal callus.

Dimensions:  $14,9 \times 6,7$  mm (holotype);  $14,65 \times 6,5$  mm (paratype).

**Distribution:** Known only from sandbanks west of central Bazaruto Island, southern Mozambique, sand and seaweed bottom.

**Type material:** Holotype N.M. G4896, leg./don. Mrs Eva Roscoe. Paratype in private coll. E. Roscoe.

**Remarks:** This attractive small species is presently known from only two specimens. It is most closely related to *Fusiaphera exquisita* (Preston, 1905) but differs from that species in its more attenuate shape and finer sculpture. The spiral sculpture in *F. exquisita* is more prominent than the axial sculpture, while in *F. eva* the reverse is true. Also, *F. exquisita* has a faint white line around the centre of the body whorl as do *F. azumai* Habe, 1961 and *F. macrospira* (Adams & Reeve, 1850), a feature lacking on *F. eva*. *Fusiaphera eva* is named in honour of its discoverer, Mrs Eva Roscoe.

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